8

CLAIMS:

1.   An accelerator composition adapted to be used with sprayed cementitious

5   compositions, which is an aqueous solution or dispersion of a blend of the essential

Components 1-3:

Component 1 - aluminium sulphate

Component 2- at least one of an alkanolamine and an alkylene diamine or triamine

10   Component 3 - hydrofluoric acid

optionally with at least one of Components 4-7, with the proviso that at least one of

Component 4 or Component 5 be present:

15   Component 4 - at least one of sodium hydroxide, potassium hydroxide, lithium

hydroxide, magnesium hydroxide, lithium carbonate, sodium carbonate, potassium

carbonate, magnesium carbonate, sodium sulphate, potassium sulphate, magnesium

sulphate and lithium sulphate;

Component 5 - $C_1 - C_{10}$ aliphatic mono- and dicarboxylic acids and their metal salts;

20   Component 6 - aluminium hydroxide;

Component 7 - at least one of phosphoric acid and phosphorous acid.

the ingredients being present in the following proportions (active ingredients by

weight);

25

Component 1 - from 30 to 60%, calculated on the basis of 17% aluminium sulphate;

Component 2 - from 0.1 to 15%

Component 3 - from 0.2 to 8.0%

Component 4 - up to 15%

30   Component 5 - up to 15%

Component 6 - up to 15%

Component 7 - up to 5%.

2.   An accelerator according to claim 1, in which Component 4 is present.

3.   An accelerator according to claim 2, in which Component 4 contains alkali metal to

5   the extent of from 1-8.5% Na_2O equivalent.

4.   An accelerator according to claim 3, in which the alkali metal equivalent is 5% Na_2O equivalent maximum.

10 5.   A method of applying a cementitious composition to a substrate by spraying, comprising the steps of mixing a batch of fluid cementitious composition and conveying it to a spray nozzle, there being injected at the nozzle an accelerator according to claim 1.

15 6.   A hardened cementitious layer applied to a substrate by spraying through a spray nozzle, there having been added at the nozzle an accelerator according to claim 1.